

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24432; Directorate Identifier 2005-NM-227-AD; Amendment 39-14678; AD 2006-14-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-100, -200, and -200C Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain Boeing Model 737 series airplanes. That AD currently requires inspection of the elevator tab inboard hinge support structure to detect fatigue cracking and corrective action if necessary. That AD also provides an optional terminating action. This new AD adds airplanes to the applicability and requires new repetitive inspections. For airplanes having elevators with laminated rear spars, this new AD requires repetitive inspections for interlaminar corrosion, delamination, or disbonding in the rear spar, repetitive inspections for cracking in the spar web, and repair including related investigative/corrective actions if necessary. For airplanes having elevators with solid rear spars, this new AD requires repetitive inspections for cracking in the spar web and repair including related investigative/corrective actions if necessary. This AD results from reports of cracks in the elevator rear spar web at the tab hinge bracket locations. We are issuing this AD to detect and correct cracking, corrosion, interlaminar corrosion, delamination, and disbonding in the elevator rear spar, which may reduce elevator stiffness and lead to in-flight vibration. In-flight vibration may lead to elevator and horizontal stabilizer damage and reduced controllability of the airplane.

DATES: This AD becomes effective August 21, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of August 21, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6440; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 76-11-05 R1, amendment 39-6234 (54 FR 25709, June 19, 1989). The existing AD applies to certain Boeing Model 737 series airplanes. That NPRM was published in the Federal Register on April 13, 2006 (71 FR 19144). That NPRM proposed to continue to require inspection of the elevator tab inboard hinge support structure to detect fatigue cracking and corrective action if necessary. That NPRM also proposed to continue to provide an optional terminating action for the existing inspections. That NPRM proposed to add airplanes to the applicability and to require new repetitive inspections. For airplanes having elevators with laminated rear spars, that NPRM proposed to require repetitive inspections for interlaminar corrosion, delamination, or disbonding in the rear spar, repetitive inspections for cracking in the spar web, and repair including related investigative/corrective actions if necessary. For airplanes having elevators with solid rear spars, that NPRM proposed to require repetitive inspections for cracking in the spar web and repair including related investigative/corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been received on the NPRM or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

There are about 1,355 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs for U.S. operators to comply with this AD.

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection, per inspection cycle	10–100	\$80	\$800–\$8,000, per inspection cycle.	230	\$184,000–\$1,840,000, per inspection cycle.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-6234 (54 FR 25709, June 19, 1989) and by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

U.S. Department
of Transportation
**Federal Aviation
Administration**



2006-14-07 Boeing: Amendment 39-14678. Docket No. FAA-2006-24432; Directorate Identifier 2005-NM-227-AD.

Effective Date

- (a) This AD becomes effective August 21, 2006.

Affected ADs

- (b) This AD supersedes AD 76-11-05 R1.

Applicability

- (c) This AD applies to Boeing Model 737-100, -200, and -200C series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005.

Unsafe Condition

- (d) This AD results from reports of cracks in the elevator rear spar web at the tab hinge bracket locations. We are issuing this AD to detect and correct cracking, corrosion, interlaminar corrosion, delamination, and disbonding in the elevator rear spar, which may reduce elevator stiffness and lead to in-flight vibration. In-flight vibration may lead to elevator and horizontal stabilizer damage and reduced controllability of the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Restatement of Certain Requirements of AD 76-11-05 R1

- (f) For Model 737-100, -200, and -200C series airplanes, line number 001 through 491 inclusive: Within the next 300 hours time-in-service after July 24, 1989 (the effective date of AD 76-11-05 R1), unless accomplished within the last 700 hours time-in-service, and at intervals thereafter not to exceed 1,000 hours time-in-service, conduct the inspection required by paragraph (g) of this AD. Accomplishing the initial inspections specified in paragraph (j) of this AD terminates the requirements of this paragraph.

- (g) For Model 737-100, -200, and -200C series airplanes, line number 001 through 491 inclusive: At the times specified in paragraph (f) of this AD, inspect for excessive deflection of the elevator tab, right and left hand, in accordance with the inspection procedures specified in Section III, Part I, paragraphs C. and D., of Boeing Alert Service Bulletin 737-55-A1020, Revision 1, dated August 20, 1976; Revision 2, dated February 11, 1977; or 737-55A1020, Revision 3, dated December 22, 1988.

If the elevator tab-to-elevator relative deflection exceeds 1/10 inch, prior to further flight, modify the elevator in accordance with paragraph (h) of this AD. Accomplishing the initial inspections specified in paragraph (j) of this AD terminates the requirements of this paragraph.

(h) For Model 737-100, -200, and -200C series airplanes, line number 001 through 491 inclusive: Installation of one of the modifications specified in Boeing Alert Service Bulletin 737-55-A1020, Revision 1, dated August 20, 1976; 737-55-A1020, Revision 2, dated February 11, 1977; or 737-55A1020, Revision 3, dated December 22, 1988; Section III, Part II, including installation of the bolt retainer clips or the preventive modification specified in Boeing Service Bulletin 737-55-1022, Section III, Part II, dated April 15, 1977; is considered terminating action for the inspection requirements of paragraph (g) of this AD.

New Requirements of This AD

Determine Elevator Group Number or Elevator Configuration Number

(i) Within 1,000 flight hours or 750 flight cycles after the effective date of this AD, whichever occurs first, determine the elevator group number or the elevator configuration number in accordance with Appendix A of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005.

Initial and Repetitive Inspections

(j) At the applicable time specified in Tables 2 and 3 of paragraph 1.E. "Compliance" of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, except where the alert service bulletin specifies a compliance time from the release date of the alert service bulletin, this AD requires the compliance time after the effective date of this AD: Do the applicable initial detailed and special detailed inspections for interlaminar corrosion, cracking, delamination, or disbonding in the rear spar by doing all the applicable actions specified in Parts I, II, and III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005; except where step 3. of Part III of the alert service bulletin specifies to do a special detailed inspection for spar interlaminar corrosion as given in Figure 3, this AD requires all actions specified in Figure 3 to be done (a detailed inspection for interlaminar corrosion and disbonding and a special detailed inspection for interlaminar corrosion and delamination). Doing the initial inspections terminates the requirements of paragraphs (f) and (g) of this AD.

(k) Repeat the inspections specified in paragraph (j) of this AD at the applicable time specified in Tables 4 and 5 of paragraph 1.E. "Compliance" of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005; except where Table B.4 in Appendix B of the alert service bulletin specifies compliance times in flight hours or flight cycles, this AD requires the actions specified in Table B.4 be done at the earlier of the compliance times in flight hours or flight cycles.

Corrective Actions

(l) If any interlaminar corrosion, cracking, delamination, or disbonding is found during any inspection required by this AD: Before further flight, use Appendix C of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, to determine the permitted repairs, and do the applicable repair, including related investigative and corrective actions, by doing all the applicable actions specified in Parts IV through VIII (Interim Repairs) and Part IX (Time-limited Repair) of the Accomplishment Instructions of the alert service bulletin, except as provided by paragraphs (n) and (o) of this AD.

(m) If the time-limited repair specified in Part IX of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, is done: At the time specified in Table 6 of paragraph 1.E. "Compliance" of the alert service bulletin, do the applicable repair, including related investigative and corrective actions, by doing all the applicable actions specified in Parts IV through VI (Interim Repairs) of the alert service bulletin. Thereafter, do the repetitive inspections specified in paragraph (k) of this AD.

(n) Where Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, specifies to contact the manufacturer for appropriate action for the inspar rib replacement or for more instructions if any crack is outside the limit specified in the service bulletin: Before further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with paragraph (p) of this AD.

(o) Where step 3.a. of Part III of the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, specifies that if interlaminar corrosion is found, spar replacement is required, this AD requires spar replacement if interlaminar corrosion, delamination, or disbonding is found. Where step 3.C. of Appendix C of the alert service bulletin specifies that for laminated spars that have interlaminar corrosion, only repair options B, C, and D are permitted, this AD specifies that for laminated spars that have interlaminar corrosion, delamination, or disbonding, only repair options B, C, and D are permitted.

Alternative Methods of Compliance (AMOCs)

(p)(1) The Manager, ACO, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Accomplishing the Interim Repair Option C or D specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1078, dated October 27, 2005, is an AMOC for the structural modification requirements specified in paragraph A. of AD 90-06-02, amendment 39-6489, that are done in accordance with Boeing Alert Service Bulletins 737-55-A1020 or 737-55A1020, or Boeing Service Bulletin 737-55-1022 only. All provisions of AD 90-06-02 that do not specifically reference these service bulletins remain fully applicable and must be complied with.

(5) AMOCs approved previously in accordance with AD 76-11-05 R1, are approved as AMOCs for the corresponding provisions of paragraphs (f) through (h) of this AD.

Material Incorporated by Reference

(q) You must use the applicable service bulletins listed in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of these documents in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

TABLE 1.—MATERIAL INCORPORATED BY REFERENCE

Service Bulletin	Revision level	Date
Boeing Alert Service Bulletin 737–55A1020	1	August 20, 1976.
Boeing Alert Service Bulletin 737–55A1020	2	February 11, 1977.
Boeing Alert Service Bulletin 737–55A1020	3	December 22, 1988.
Boeing Alert Service Bulletin 737–55A1078	Original	October 27, 2005.
Boeing Service Bulletin 737–55–1022	Original	April 15, 1977.

Boeing Alert Service Bulletin 737-55-A1020, Revision 1, dated August 20, 1976, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1, 11–27	1	August 20, 1976.
2–10	Original	May 20, 1976.

Boeing Alert Service Bulletin 737-55-A1020, Revision 2, dated February 11, 1977, contains the following effective pages:

Page No.	Revision level shown on page	Date shown on page
1, 3, 6, 10–12, 14, 16, 25	2	February 11, 1977.
2, 4, 5, 7–9	Original	May 20, 1976.
13, 15, 17–24, 26, 27	1	August 20, 1976.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on July 3, 2006.
 Kalene C. Yanamura,
 Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
 [FR Doc. 06-6152 Filed 7-14-06; 8:45 am]
 BILLING CODE 4910-13-P